

In Situ Resource Utilization (ISRU) Technical Interchange Meeting

February 4-5, 1997
Lunar and Planetary Institute
Houston, Texas

IN SITU RESOURCE
UTILIZATION (ISRU) TECHNICAL
INTERCHANGE MEETING

February 4–5, 1997
Lunar and Planetary Institute
Houston, Texas

Convened by

David Kaplan
NASA Johnson Space Center

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PREFACE

This volume contains abstracts that have been accepted for presentation at the In Situ Resource Utilization (ISRU) Technical Interchange Meeting, February 4–5, 1997, at the Lunar and Planetary Institute, Houston, Texas. Abstracts are arranged in order of presentation at the meetings, with corresponding page numbers shown in the enclosed agenda.

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IN SITU RESOURCE UTILIZATION (ISRU) TECHNICAL INTERCHANGE MEETING

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AGENDA

Tuesday, February 4, 1997

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10:00 a.m.	BREAK	
10:15 a.m.	D. Rapp <i>Adsorption Pump for Acquisition and Compression of Atmospheric CO₂ on Mars</i>	3
11:00 a.m.	M. Reddig <i>CO₂ Pumping System for Mars ISRU: Advanced Absorbent Materials</i>	5
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2:45 p.m.	A. Ignatiev <i>Thin Film Solar Cell Growth on the Surface of the Moon by Vacuum Evaporation</i>	13
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4:45 p.m.	C. C. Allen <i>Regolith Evolved Gas Analyzer (REGA)</i>	19

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11:15 a.m.	L. Vuskovic <i>Radio-Frequency-based Glow-Discharge Extraction of Oxygen from Martian Atmosphere: Experimental Results and System Validation Strategies</i>	31
11:45 a.m.	LUNCH	
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2:45 p.m.	S. Gorevan <i>Technology Allowing for Qualification, Sampling, Removal and Excavation of Minerals and Elements from Below the Surface of Planetary Bodies</i>	37
3:15 p.m.	S. C. Coons <i>Experimental Study of a Water Vapor Adsorption Reactor for Mars In Situ Resource Utilization</i>	39
3:45 p.m.	BREAK	
4:00 p.m.	D. L. Clark <i>In Situ Propellant Production on Mars: A Sabatier/Electrolysis Demonstration Plant</i>	41
4:45 p.m.	D. Kaplan <i>MIP Flight Demonstration</i>	43
5:15 p.m.	Meeting Wrap Up	

